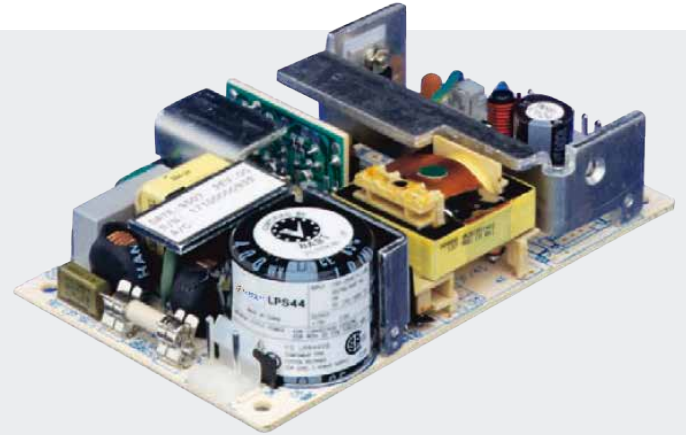


# ARTESYN LPS40-M SERIES

40 Watts Medical



Advanced Energy's Artesyn LPS40-M series of open-frame comprises four single output models, offering voltages of 5 V, 12 V, 15 V or 24 V. Each model accepts a universal input of 85—264 Vac or 120—300 Vdc. All four feature medical safety approvals, with a very low safety ground leakage current of less than 75 microamps. These compact switch-mode power supplies feature output overvoltage and short-circuit protection, as well as remote sense. They provide 40 watts of output power with free air convection cooling and 55 watts with 30 CFM of forced air. Less than 1U high, LPS40-M power supplies are designed for medical, test and measurement, single-board computers, telecommunications and networking applications.

## DATA SHEET

### Total Power:

40 - 55 Watts

### Input Voltage:

85 - 264 Vac  
120 - 300 Vdc

### # of Outputs:

Single

### SPECIAL FEATURES

- Medical safety approvals
- Universal input
- 3" x 5" footprint
- Less than 1U high
- Remote sense on main output
- Low output ripple
- Adjustable 5V output
- Overvoltage protection
- Overload protection
- 110 KHz switching frequency
- RoHS compliant
- LPX40 enclosure kit available

### SAFETY

- VDE 0750/EN60601-1 (IEC601)
- UL UL2601 E182560
- CSA CSA 22.2 No.601.1 LR109492
- CE Mark (LVD)

## ELECTRICAL SPECIFICATIONS

Input	
Input range	85 - 264 Vac; 120 - 300 Vdc
Frequency	47 - 440 Hz
Inrush current	< 18A peak @ 115 Vac; <36A peak @ 230 Vac, cold start @ 25 °C
Input current	1A max. (RMS) @ 115 Vac
Efficiency	70% typical at full load
EMI filter	FCC Class B conducted; CISPR 22 Class A conducted; EN55022 Class A conducted; VDE 0878 PT3 Class A conducted
Safety ground leakage current	< 75 $\mu$ A @ 50/60 Hz, 264 Vac input
Output	
Maximum power	40 W for convection; 55 W with 30CFM forced air
Adjustment range	-5, +10% minimum
Hold-up time	20 ms @ 40 W load, 115 Vac nominal line
Overload protection	Short circuit protection on all outputs Case overload protected @ 110 - 145% above peak rating
Overvoltage protection	5 V output; 5.7 to 6.7 Vdc. Other outputs 10% to 25% above nominal output
Remote sense	Compensates for 0.5 V lead drop minimum Will operate without remote sense connected Reverse connection protected

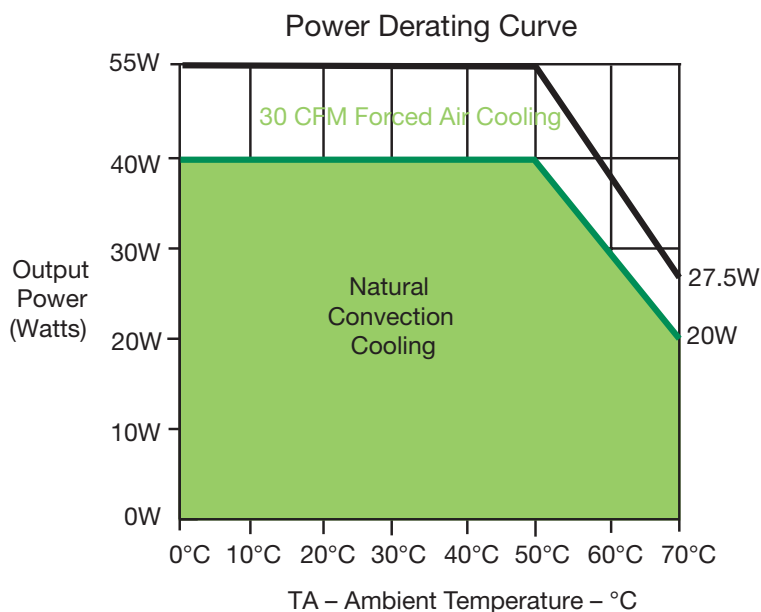
## ENVIRONMENTAL SPECIFICATIONS

Operating temperature	0° to 50 °C ambient. Derate each output 2.5% per degree from 50° to 70 °C, -20 °C startup
Storage temperature	-40 °C to +85 °C
Temperature coefficient	$\pm$ 0.4% per °C
Electromagnetic susceptibility	Designed to meet IEC 801, -2, -3, -4, -5, -6, Level 3
Humidity	Operating; non-condensing 5% to 95% RH
Vibration	Three orthogonal axes, sweep at 1 oct/min, 5 min. dwell at four major resonances 0.75G peak 5 Hz to 500 Hz, operational
MTBF demonstrated	> 550,000 hours at full load and 25 °C ambient conditions

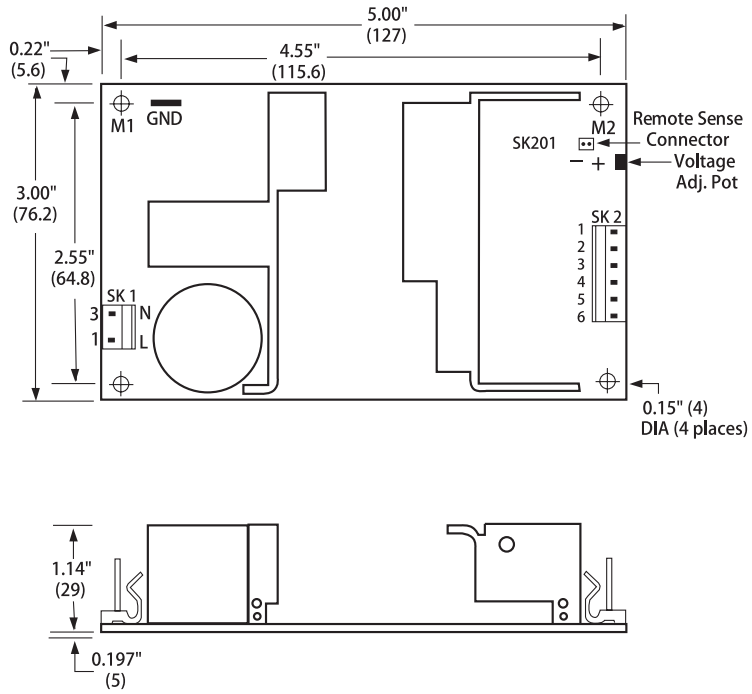
ORDERING INFORMATION

Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load <sup>1</sup>	Regulation <sup>2</sup>	Ripple P/P(PARD) <sup>3</sup>
LPS42-M	5 V	0A	8 A	11 A	12 A	± 2%	50mV
LPS43-M	12 V	0A	3.3 A	4.5 A	5 A	± 2%	120 mV
LPS44-M	15 V	0A	2.6 A	3.6 A	4 A	± 2%	150 mV
LPS45-M	24 V	0A	1.6 A	2.3 A	2.5 A	± 2%	240 mV

1. Peak current lasting < 30 seconds with a maximum 10% duty cycle.
2. At 25 °C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. Peak-to-peak with 20 MHz bandwidth and 10 μF in parallel with a 0.1 μF capacitor at rated line voltage and load ranges.
4. This product is a Component Power Supply and is only for inclusion by professional installers within other equipment and must not be operated as a standalone product. EMC compliance to appropriate standards must be verified at the system level. This product is for sale to OEMs and System Integrators, including through Distribution Channels. It is not intended for sale to End Users.



MECHANICAL DRAWING



## PIN ASSIGNMENTS

Connector	LPS42-M	LPS43-M	LPS44-M	LPS45-M
SK1-1	Line	Line	Line	Line
SK1-3	Neutral	Neutral	Neutral	Neutral
SK2-1	+5 V	+12 V	+15 V	+24 V
SK2-2	+5 V	+12 V	+15 V	+24 V
SK2-3	+5 V	+12 V	+15 V	+24 V
SK2-4	Common	Common	Common	Common
SK2-5	Common	Common	Common	Common
SK2-6	Common	Common	Common	Common
SK201-1	+Sense	+Sense	+Sense	+Sense
SK201-2	-Sense	-Sense	-Sense	-Sense

## MATING CONNECTORS

AC Input	Molex 09-50-8031 (USA) 09-93-0300 (UK) PINS: 08-52-0113
DC Outputs	Molex 09-50-8061 (USA) 09-93-0600 (UK) PINS: 08-52-0113
Remote Sense	Molex 22-01-2025 PINS: 08-52-0123
Artesyn Embedded Power Connector Kit #70-841-006, includes all of the above	

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is  $\pm 0.02$ " ( $\pm 0.5$ mm)
3. Mounting holes M1 and M2 should be grounded for EMI purposes.
4. Mounting hole M1 is safety ground connection.
5. Specifications are for convection rating at factory settings at 115 Vac input, 25 °C unless otherwise stated.
6. Warranty: 2 years
7. Weight: 0.5lbs/0.23kg



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## ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE

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